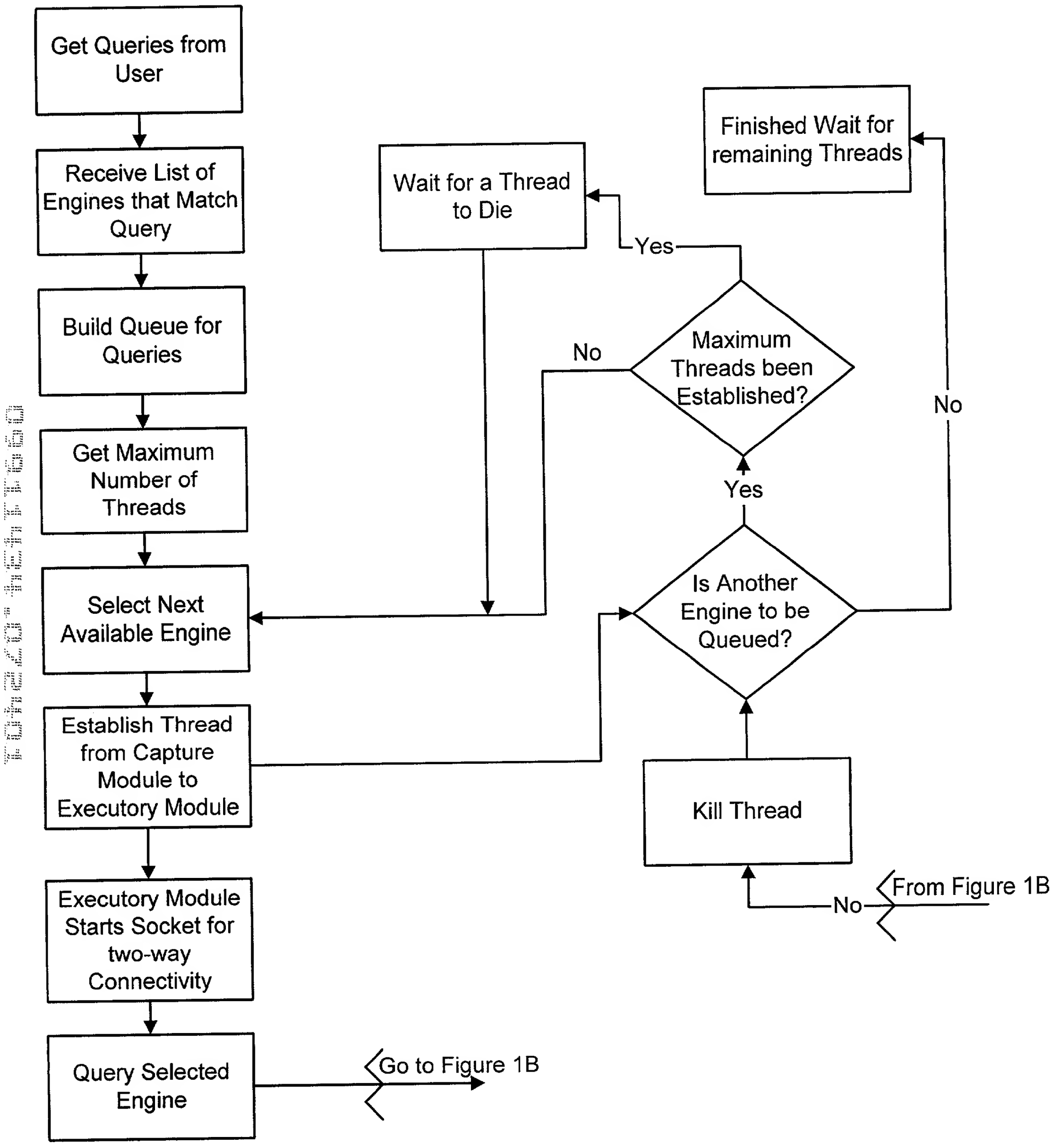
Get Queries from User
Receive List of Engines that Match Query
Build Queue for Queries
Get Maximum Number of Threads
Select Next Available Engine
Establish Thread from Capture Module to Executory Module
Executory Module Starts Socket for two-way Connectivity
Query Selected Engine
Go to Figure 1B
Wait for a Thread to Die
Yes
Maximum Threads been Established?
No
Finished Wait for remaining Threads
No
Yes
Is Another Engine to be Queued?
Kill Thread
No
From Figure 1B

Figure 1A

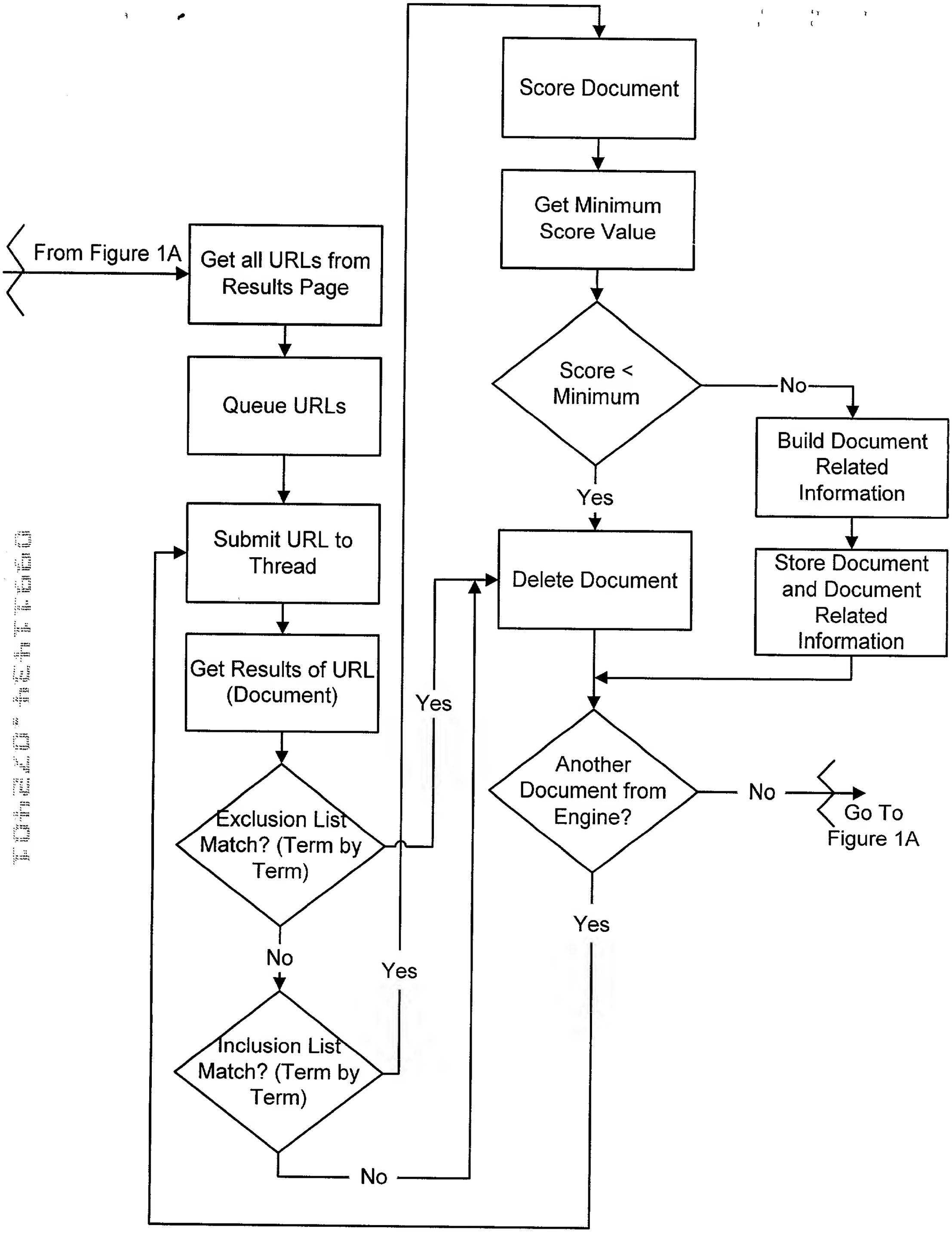
From Figure 1A
Get all URLs from Results Page
Queue URLs
Submit URL to Thread
Get Results of URL (Document)
Exclusion List Match? (Term by Term)
Yes
No
Inclusion List Match? (Term by Term)
Yes
No
Score Document
Get Minimum Score Value
Score < Minimum
Yes
No
Build Document Related Information
Store Document and Document Related Information
Delete Document
Another Document from Engine?
Yes
No
Go To Figure 1A

Figure 1B

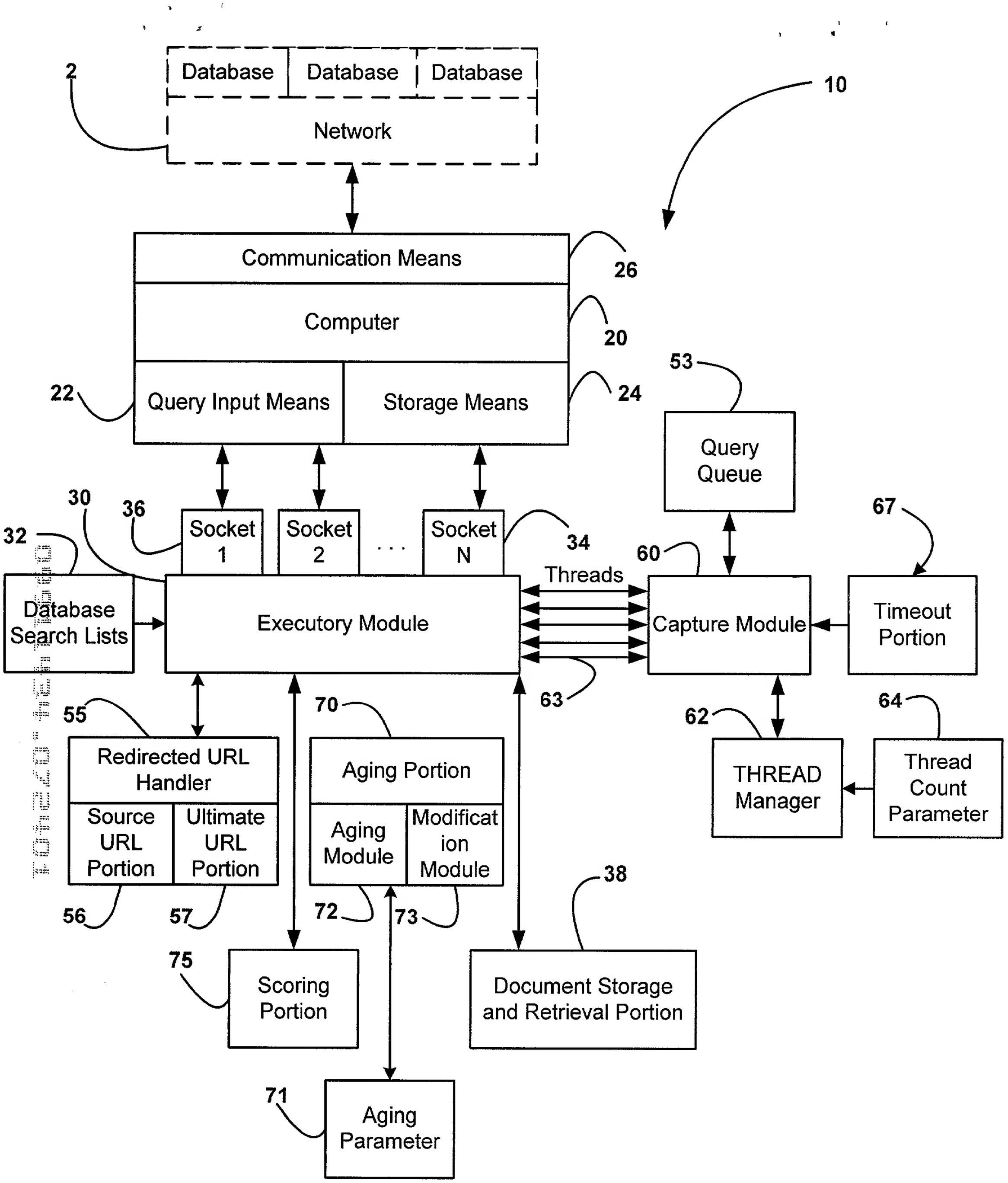
2
Database
Database
Database
Network
10
Communication Means
26
Computer
20
22
Query Input Means
Storage Means
24
53
Query Queue
30
36
32
Socket 1
Socket 2
Socket N
34
60
67
Threads
Database Search Lists
Executory Module
Capture Module
Timeout Portion
63
55
70
62
64
Redirected URL Handler
Aging Portion
THREAD Manager
Thread Count Parameter
Source URL Portion
Ultimate URL Portion
Aging Module
Modification Module
56
57
72
73
38
75
Scoring Portion
Document Storage and Retrieval Portion
71
Aging Parameter

Figure 2

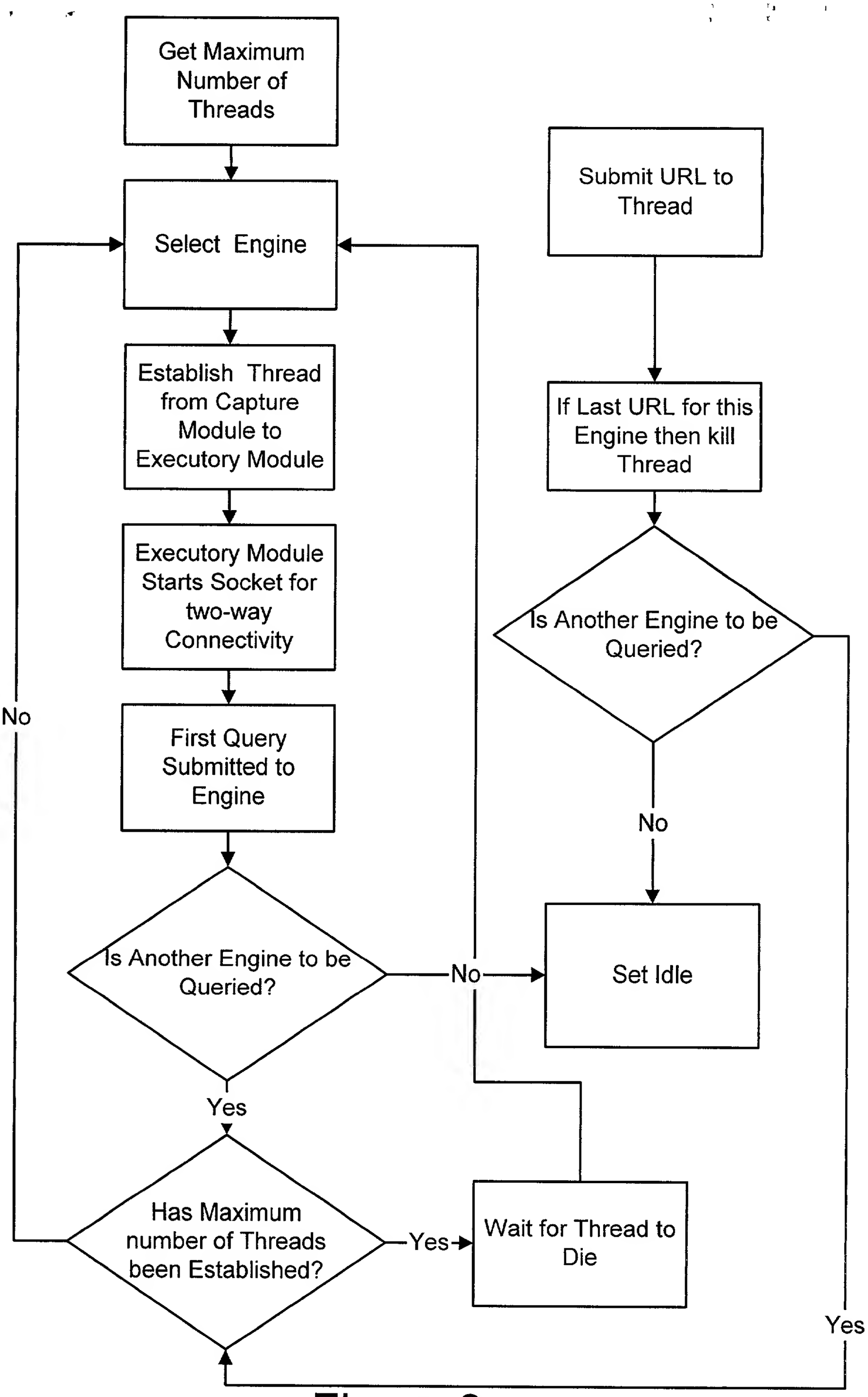
Get Maximum Number of Threads
Select Engine
Establish Thread from Capture Module to Executory Module
Executory Module Starts Socket for two-way Connectivity
First Query Submitted to Engine
Is Another Engine to be Queried?
No
Yes
Has Maximum number of Threads been Established?
Yes
Wait for Thread to Die
Submit URL to Thread
If Last URL for this Engine then kill Thread
Is Another Engine to be Queried?
No
Set Idle
Yes

Figure 3

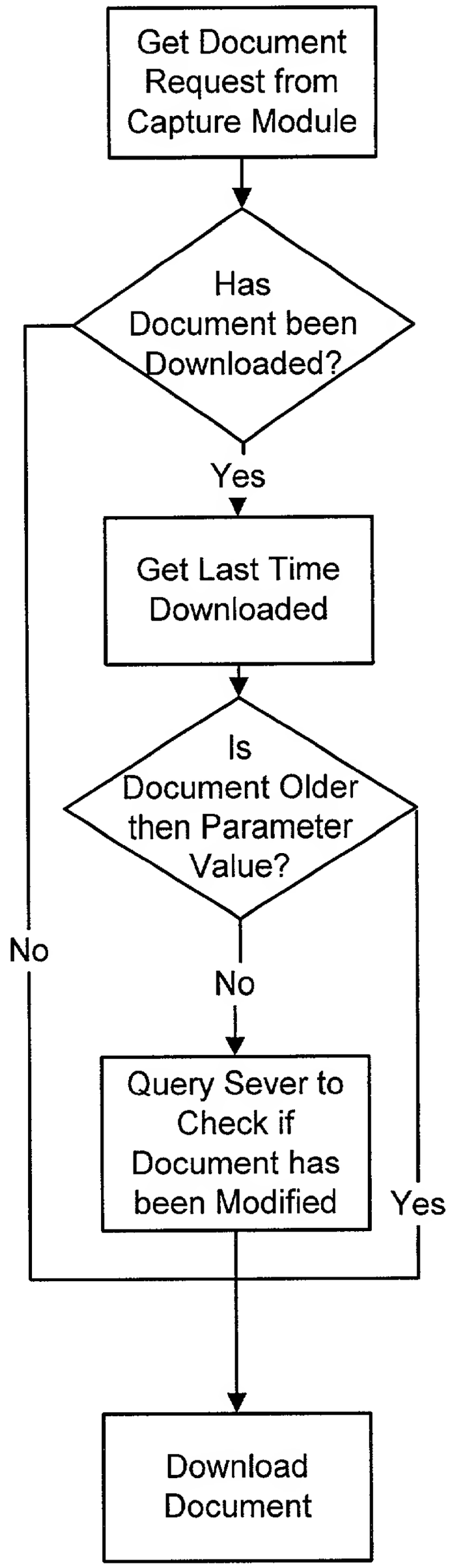
Get Document Request from Capture Module
Has Document been Downloaded?
Yes
Get Last Time Downloaded
Is Document Older then Parameter Value?
No
No
Query Sever to Check if Document has been Modified
Yes
Download Document

Figure 4

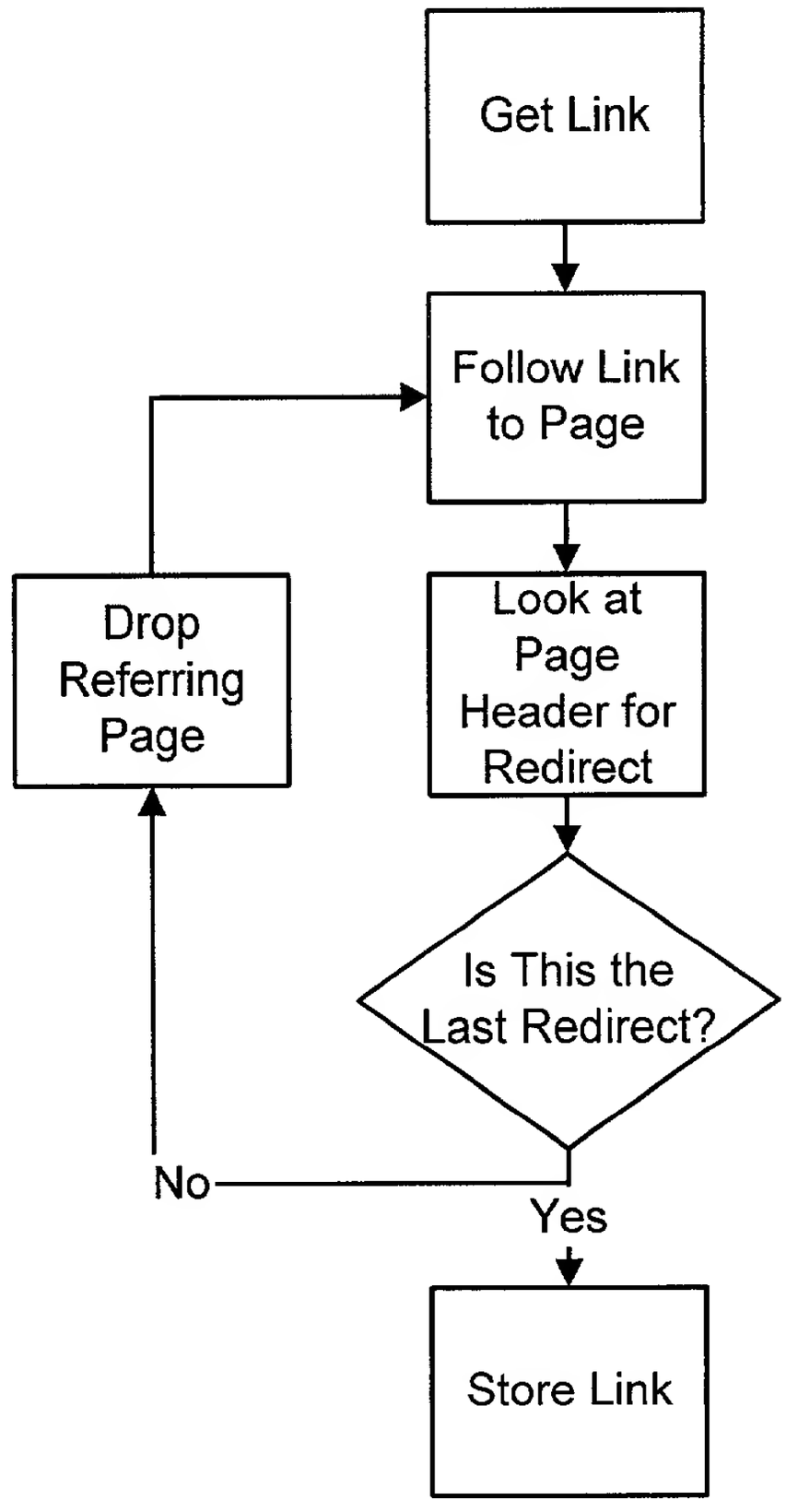
Get Link
Follow Link to Page
Look at Page Header for Redirect
Is This the Last Redirect?
No
Yes
Drop Referring Page
Store Link

Figure 5

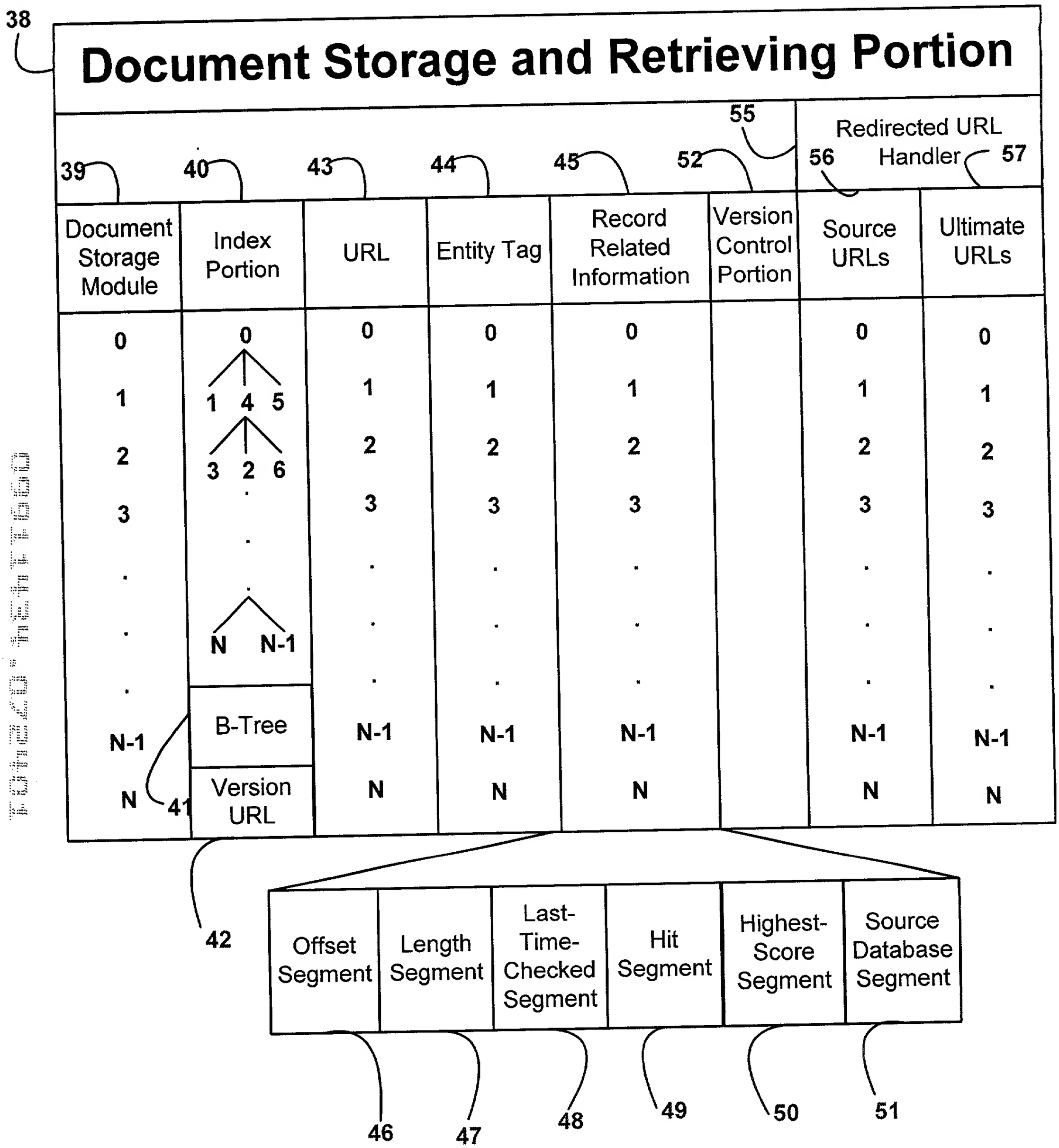
38
Document Storage and Retrieving Portion
39
40
43
44
45
52
55
Redirected URL Handler
56
57
Document Storage Module
Index Portion
URL
Entity Tag
Record Related Information
Version Control Portion
Source URLs
Ultimate URLs
0
1
2
3
N-1
N
0
1 4 5
3 2 6
N N-1
B-Tree
Version URL
41
42
Offset Segment
Length Segment
Last-Time-Checked Segment
Hit Segment
Highest-Score Segment
Source Database Segment
46
47
48
49
50
51

Figure 6

45

Record Related Information

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51

47 48 49

46

Offset Segment	Length Segment	Last Time Checked Segment	Hits Segment	Highest Score Segment	Database Segment
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
N-1	N-1	N-1	N-1	N-1	N-1
N	N	N	N	N	N

Figure 7